

Physiotherapy guidance following breast surgery and axillary lymph node dissection (ALND) before leaving the hospital (2020)

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Dear patient,

There is a consensus among medical professionals that each and every patient, should receive instructions about the recovery stages following breast cancer surgery. We have assembled that guidance here for you.

These instructions are based on a study we conducted over the past two years, where we developed guidelines to reduce the risk of post-op side effects.

We hope that this information will help you through your recovery period and wish you a speedy healing process. Breast surgery, lymph node removal, and the accompanying treatments are highly conducive to cancer recovery process. However, some women may experience immediate or delayed side effects such as pain, a limited range of movement in the shoulder on the side of the surgery, and edema (swelling).

In order to expedite the post-op healing process and reduce the risk of future side effects, it is important to take on certain practices. In this manual, we have listed recommended practices for the healing period right after surgery (until the surgical scar is healed and the drain removed).

This supplements the medical instructions your physician and nurse provided. Our hope is that this will help you remember all the exercise guidance you received so you can safely do them at home after being discharged.

The recommendations are divided into three chapters:

- **First chapter** – Guidance for the post-op period
- **Second chapter** – Recommended exercises for the different stages of recovery
- **Third chapter** – Instructions regarding the reducing risk of lymph edema (swelling) and other side effects

First chapter – Guidance for the post-op period (until the surgical scar is healed and the drain removed)

Exercise instructions:

In most hospitals, a physiotherapist provides instructions for exercises to be performed at the hospital and later at home.

Breathing exercises:

These are very important during the first days following surgery to prevent surgery- and anesthesia-related respiratory difficulties.

- **Deep breaths** – Take 5-10 deep breaths every two hours.
- **Coughing and phlegm** – This can prevent fluids from building up in the respiratory system. If coughing proves difficult, the physiotherapist can discuss pain relief options.
- **Mobility** – To work the respiratory system and help with overall movement, make sure you walk and sit during the day. Avoid lying down for many hours at a time. When standing and walking, try to relax your arm and shoulder on the side of the surgery, allowing them to move freely.

Instructions for maintaining range of movement:

- To regain full function as soon as possible, you should begin the exercises suggested by the physiotherapist the first day after surgery. Different exercises are recommended for each stage of recovery. You will gradually progress from stage to stage.
- The exercises help maintain elasticity in the axillary surgery scar area as well as mobility of the back, chest, shoulder and arm.
- The exercises are rated according to difficulty. You may progress carefully with regards to range of movement and muscular resistance.
- Do not strain the arm on the side of the surgery for the first three weeks following surgery (avoiding heavy lifting, sudden movements and any painful motion).
- Do the exercises slowly, until you reach the point of pain, and repeat each exercise 5-10 times, 1-3 times a day.







Second chapter – Recommended exercises for the different stages of recovery


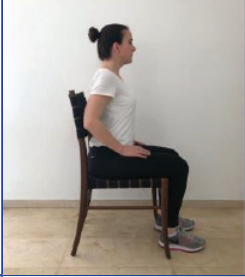

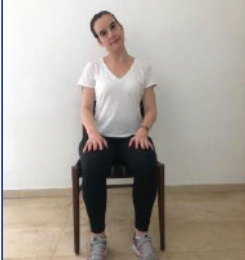
Guidelines and general comments





- If you feel fatigue and heaviness in the arm on the surgery side, place it on pillows so the palm is elevated above the shoulder, while opening and closing your fist.
- To maintain elasticity in the surgical scar area healing, gently massage that side during the shower, paying special attention to the scar.
- If signs of inflammation appear, such as redness, swelling, discharge, a fever over 38°C or the pain worsens and does not respond to regular pain management techniques, promptly contact your physician or go the ER.

At any point in your treatment you may visit one of our physiotherapy facilities for consultation and therapy suitable to the specific stage you are in. Contact information can be found in our services manual. No referral is required.

In the following section, you can see examples of exercises according to specific recovery stages. You may also choose other exercises with your physiotherapist.

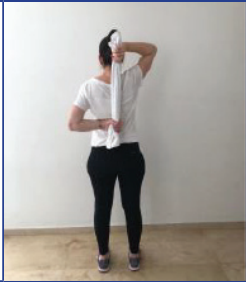

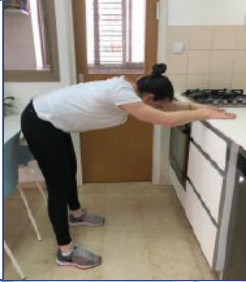

	Starting position	Goal	Exercise instructions	Picture for demonstration
1	Lie on your back, with your knees bent. Place your feet on the mat at pelvis width apart. Lay a small pillow under your head with your hands along the sides of your body.	Deep breathing	Inhale deeply (preferably through the nose), and exhale through the mouth	
2		Back mobility*	Let your knee fall sideways, then lift the other side of your pelvis so your knee is closer to the mat. Return to the starting position by going in reverse order	
3		Neck mobility	Slowly role your head from side to side (this exercise should be done with open and closed eyes)	
4		Shoulder blade mobility	Bring your shoulders up towards your head and let them fall back into place. Bring your shoulders closer to each other and let them fall back into place	
5		Working the elbow and fingers	Alternately bend and straighten your elbows, closing your fist when bending the elbow and open it when straightening it.	
6		Initial shoulder exercises	Cross your fingers over your belly, then straighten your elbows down towards your legs and lift up towards the ceiling. Take care that your arms do not go higher than your shoulders, and stop if you feel pain.	

	Starting position	Goal	Exercise instructions	Picture for demonstration
1	Lie on your back, as in stage A	Repeat	Repeat exercises from stage A	
2	Sit on a chair, with your feet on the floor, back straight, and arms relaxed along the side of your body.	Relaxing the shoulder, neck and shoulder blades	Lift shoulders towards your ears, hold for a few seconds and relax. You may inhale during lifting and exhale during relaxation	
3			Pull your shoulders back, making sure you do not lift them towards your head, with your neck and back straight. Hold the position for a few seconds and relax. Rotate your shoulders up, back and down, returning to the original position	
4			Straightening the elbow and working the shoulder with the opposite hand	Cross your fingers, straighten your elbows and lift your arms to shoulder height. Restricting the movement in this manner helps the surgical scar to heal
5	Sit on a chair, feet on the floor, back straight, each hand placed on the opposite shoulder. Elbows resting on your body	Back and neck movement while working the shoulder	Slightly lift your elbows, turning your head and hands to one side then to the other side. This movement should only be done at a pain-free range	
6			Tilt your head and your back sideways, hold for a few seconds then return to the starting position	

	Starting position	Goal	Exercise instructions	Picture for demonstration
1	Sitting	Repeat	Repeat exercises from stage B	
2			Cross your fingers over your stomach and lift your hands over your head. Check the distance between your hands and the mat in the back. You may lay a pillow under your head to allow your hands to rest at the end of the exercise	
3	Lie on your back, with your knees bent. Place your feet on the mat at pelvis width apart. Lay a small pillow under your head with your hands along the sides of your body.	Improving shoulder and back movement ranges	Cross your fingers, lift your hands towards the ceiling and rest them behind your head. Check how far your elbows are from the mat. Bring your elbows together and apart several times. Finally, lift hands back towards the ceiling and your stomach. Let your hands relax along the sides of your body	
4			Let your knee fall sideways, then lift the opposite side of your pelvis so your knee is closer to the mat. Return to the starting position by going in reverse order	
5	Stand in front of a wall		Let your fingers extend up until your elbows are straight. Let your gaze follow the movement. When your arms straight, look down and stay for a few seconds. Take a few steps closer to the wall and try to let your palms extend further up. Remain in this stretching position for a few seconds, then slowly walk backwards, sliding your hands down the wall. Repeat this exercise at a pain-free range.	

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6	Stand up straight feet slightly apart		Hold a towel, with one hand behind your head and the other behind your back. Pull the towel up and down. Change hands several times	
7	Stand facing the counter with your forearms on the counter and your head in line with your back		Taking small steps, walking away from the counter, until you feel a comfortable elongation of the shoulders, back, and legs. Hold this position for a few seconds, then step forward until you are standing in front of the counter	
8		Extending back, shoulder and leg movement ranges	Hold the counter and step back until you feel your chest cavity expanding and your arms lengthening. Pay attention to your breathing. Step forward towards the counter	
9	Stand with your back to the counter, pelvis touching the counter, with each hand holding the counter on its side		Without moving your feet, move your right palm to the left wrist, following this movement with your eyes. Hold for a few seconds, then repeat on the other side. You should feel a pleasant twisting sensation in the shoulder area and the back	

Third chapter – Instructions for reducing risk of side effects

Some women may experience side effects at different times after surgery. These side effects may pertain to the back, shoulder, breast or arm on the side of the surgery, or they can be general. Examples of localized side effects are lymphatic edema (swelling), movement limitations, heaviness and tightness in the arm and pain in the breast, shoulder or arm. Examples of general side effects are severe fatigue, difficulty sleeping and moodiness.

The following recommendations help reduce the risk of both localized and general side effects. For example, the recommendation to engage in physical activity is relevant to lymphatic edema as well as reducing fatigue and improving your sleep and your mood.

Lymphatic edema:

The lymphatic system is a part of the immune system, playing an important role in moving fluids and proteins throughout the body. Following surgery in which axillary lymph nodes have been removed, the lymphatic system's draining ability on the operated on side may be compromised, resulting in swelling (lymphatic edema) in the arm or breast.

It is important to note that in most cases, the adjacent nodes take over for the ones that were removed, so no future functional limitations are expected.

A lymphatic edema (swelling) occurs when lymphatic fluid is accumulated in a subdermal tissue. This condition is chronic and may reappear months and even years after surgery. The lymphatic edema can be treated but not fully cured with lymphatic physiotherapy, so it is all the more important that steps are taken to reduce the risk of its occurrence.

General recommendations for the reduction of the risk of a lymphatic edema and other side effects:

1. Maintain hygiene and prevent infections, by taking cautionary steps and disinfecting any skin wound.
2. Maintain a range of movement in your back and shoulder
3. As soon as possible, return to your daily routine and activities, including the use of your arm.
4. Participate in physical activities that offer both aerobic exercises and gradual resistance exercises for both arms.
5. Maintain a healthy weight.
6. Get a referral for a lymphatic physiotherapist's follow up 2-3 weeks after surgery. Some women may not feel ready to receive new information of the first day following surgery. During follow up, you can receive detailed instructions for preventive measures and request recommendations going forward.
7. Be vigilant of symptoms such as arm swelling (lymphatic edema), infection (skin irritation and/or heat, redness, pain, flu-like feelings, fever or chills) or new movement limitations, and seek physiotherapy as soon as possible.

Specific recommendations for reducing the risk of lymphatic edema and other side effects:

Maintain hygiene and prevent infections:

- Be careful of any direct injuries such as burns, sunburn or excessive tanning, cuts, animal-inflicted scratches, stings, etc. In case of an injury, wash your hands with soap and water and use a disinfectant like iodine or 70% rubbing alcohol.
- Opinions are divided regarding the risk involved in drawing blood from or administering an injection in the arm on the side of the surgery. Therefore, the recommended to refrain from blood draws, shots, or injections.
- To remove armpit hair, use an electric shaver.
- Make sure to wash your hands with soap and water after working in an unclean environment (like gardening and washing dishes). You may use gloves for such activities, especially in case the skin could be cut (lesion, scratch, etc.).
- Take care to prevent cuts in the area of your fingernails and the skin around them.
- Keep your skin soft with a moisturizing cream.

Preventing prolonged pressure:

- Avoid extended pressure on the arm on the operated on side. This pressure can be caused by, among other things, tight clothing and jewelery
- Use a bra that offers full support, with a wide, padded shoulder strap, to prevent excessive pressure on the chest or localized pressure on the breast.

Using compression devices:

Opinions are divided regarding the use of compression devices such as dressings, sleeves or an edema-preventing bra. Some recommend wearing a compression sleeve during flights and strenuous arm exercise. Whatever you decide, using compression devices should only be done at the lymphatic therapist's recommendation. It is also important to make sure the product is used correctly.

First signs of lymphatic edema:

There are several common indicators of lymphatic edema:

- A feeling of fullness or heaviness in the breast, hand or arm.
- Itching, pain or sensitivity in those areas.
- Swelling (may come and go).
- A bra, ring, bracelet, wrist watch or sleeve may be too tight or leave a mark. (Make sure you can distinguish between pressure caused by swelling or by weight gain).
- Pressing near the treatment site leaves a dent in the skin.
- The skin is warm or hard.
- Numbness or prickling in the limbs.

Notes:

- * If you notice one or more of these signs, consult your physician and ask for a referral for lymphatic physiotherapy.
- * If you had surgery on both sides, make sure to follow these guidelines on both sides.

Instructions for resuming routine physical activity:

- After the surgical scar has healed, the drain has been removed, and you have resumed a daily routine, You must begin a physical activity routine as well. At first resume simply daily activities like combing your hair, applying makeup, cooking, washing dishes and hanging laundry.
- Your exercise plan must be appropriate and gradual. If you used to exercise prior to surgery, you should return to your routine.
- It is highly recommended that any exercise plan include aerobic activity and arm strengthening exercises. Aerobic activities include brisk walks, jogging, swimming and dancing. Choose the activity best for you and do it at least 3 times a week for 50 minutes.
- For muscle toning, consult a lymphatic physiotherapist and work closely with the trainer, who will assemble a gradual personalized plan. Sudden strenuous activity may be harmful.
- If arm swelling appears during exercise, use an elastic bandage or a compression sleeve. If breast swelling appears during exercise, use a compression bra. Consult a lymphatic physiotherapist about using these devices.
- Note that lymphatic physiotherapy and compression devices for lymph-edema are included in the Medical Services Basket and funded by all HMOs.

Maintaining a healthy weight:

If you experience difficulty maintaining a healthy body weight, consult a dietitian about eating habits.

**We wish you a full
and speedy recovery!**

